```
   1 TCCTGCACAG GCAGTGCCTT GAAGTGCTTC TTCAGAGACC TTTCTTCATA GACTACTTTT TTTTCTTTAA GCAGCAAAAG GAGAAAATTG TCATCAAAGG
     AGGACGTGTC CGTCACGGAA CTTCACGAAG AAGTCTCTGG AAAGAAGTAT CTGATGAAAA AAAAGAAATT CGTCGTTTTC CTCTTTTAAC AGTAGTTTCC
   1 SerCysThrG lySerAlaLe uLysCysPhe PheArgAspL euSerSerAM *ThrThrPhe PheSerLeuS erSerLysAr gArgLysLeu SerSerLysAsp

 101 ATATTCCAGA TTCTTGACAG CATTCTCGTC ATCTCTGAGG ACATCACCAT CATCTCAGGA TGAGGGGCAT GAAGCTGCTG GGGGCGCTGC TGGCACTGGC
     TATAAGGTCT AAGAACTGTC GTAAGAGCAG TAGAGACTCC TGTAGTGGTA GTAGAGTCCT ACTCCCCGTA CTTCGACGAC CCCCGCGACG ACCGTGACCG
  35   IleProAs pSerOP*Gln HisSerArgH isLeuOP*Gl yHisHisHis HisLeuArgM etArgGlyMe tLysLeuLeu GlyAlaLeuL euAlaLeuAla

 201 GGCCCTACTG CAGGGGGCCG TGTCCCTGAA GATCGCAGCC TTCAACATCC AGACATTTGG GGAGACCAAG ATGTCCAATG CCACCCTCGT CAGCTACATT
     CCGGGATGAC GTCCCCCGGC ACAGGGACTT CTAGCGTCGG AAGTTGTAGG TCTGTAAACC CCTCTGGTTC TACAGGTTAC GGTGGGAGCA GTCGATGTAA
  68  AlaLeuLeu GlnGlyAlaV alSerLeuLy sIleAlaAla PheAsnIleG lnThrPheGl yGluThrLys MetSerAsnA laThrLeuVa lSerTyrIle

 301 GTGCAGATCC TGAGCCGCTA TGACATCGCC CTGGTCCAGG AGGTCAGAGA CAGCCACCTG ACTGCCGTGG GGAAGCTGCT GGACAACCTC AATCAGGATG
     CACGTCTAGG ACTCGGCGAT ACTGTAGCGG GACCAGGTCC TCCAGTCTCT GTCGGTGGAC TGACGGCACC CCTTCGACGA CCTGTTGGAG TTAGTCCTAC
 101 ValGlnIleL euSerArgTy rAspIleAla LeuValGlnG luValArgAs pSerHisLeu ThrAlaValG lyLysLeuLe uAspAsnLeu AsnGlnAspAla

 401 CACCAGACAC CTATCACTAC GTGGTCAGTG AGCCACTGGG ACGGAACAGC TATAAGGAGC GCTACCTGTT CGTGTACAGG CCTGACCAGG TGTCTGCGGT
     GTGGTCTGTG GATAGTGATG CACCAGTCAC TCGGTGACCC TGCCTTGTCG ATATTCCTCG CGATGGACAA GCACATGTCC GGACTGGTCC ACAGACGCCA
 135   ProAspTh rTyrHisTyr ValValSerG luProLeuGl yArgAsnSer TyrLysGluA rgTyrLeuPh eValTyrArg ProAspGlnV alSerAlaVal

 501 GGACAGCTAC TACTACGATG ATGGCTGCGA GCCCTGCGGG AACGACACCT TCAACCGAGA GCCAGCCATT GTCAGGTTCT TCTCCCGGTT CACAGAGGTC
     CCTGTCGATG ATGATGCTAC TACCGACGCT CGGGACGCCC TTGCTGTGGA AGTTGGCTCT CGGTCGGTAA CAGTCCAAGA AGAGGGCCAA GTGTCTCCAG
 168   AspSerTyr TyrTyrAspA spGlyCysGl uProCysGly AsnAspThrP heAsnArgGl uProAlaIle ValArgPheP heSerArgPh eThrGluVal

 601 AGGGAGTTTG CCATTGTTCC CCTGCATGCG GCCCCGGGGG ACGCAGTAGC CGAGATCGAC GCTCTCTATG ACGTCTACCT GGATGTCCAA GAGAAATGGG
     TCCCTCAAAC GGTAACAAGG GGACGTACGC CGGGGCCCCC TGCGTCATCG GCTCTAGCTG CGAGAGATAC TGCAGATGGA CCTACAGGTT CTCTTTACCC
 201 ArgGluPheA laIleValPr oLeuHisAla AlaProGlyA spAlaValAl aGluIleAsp AlaLeuTyrA spValTyrLe uAspValGln GluLysTrpGly

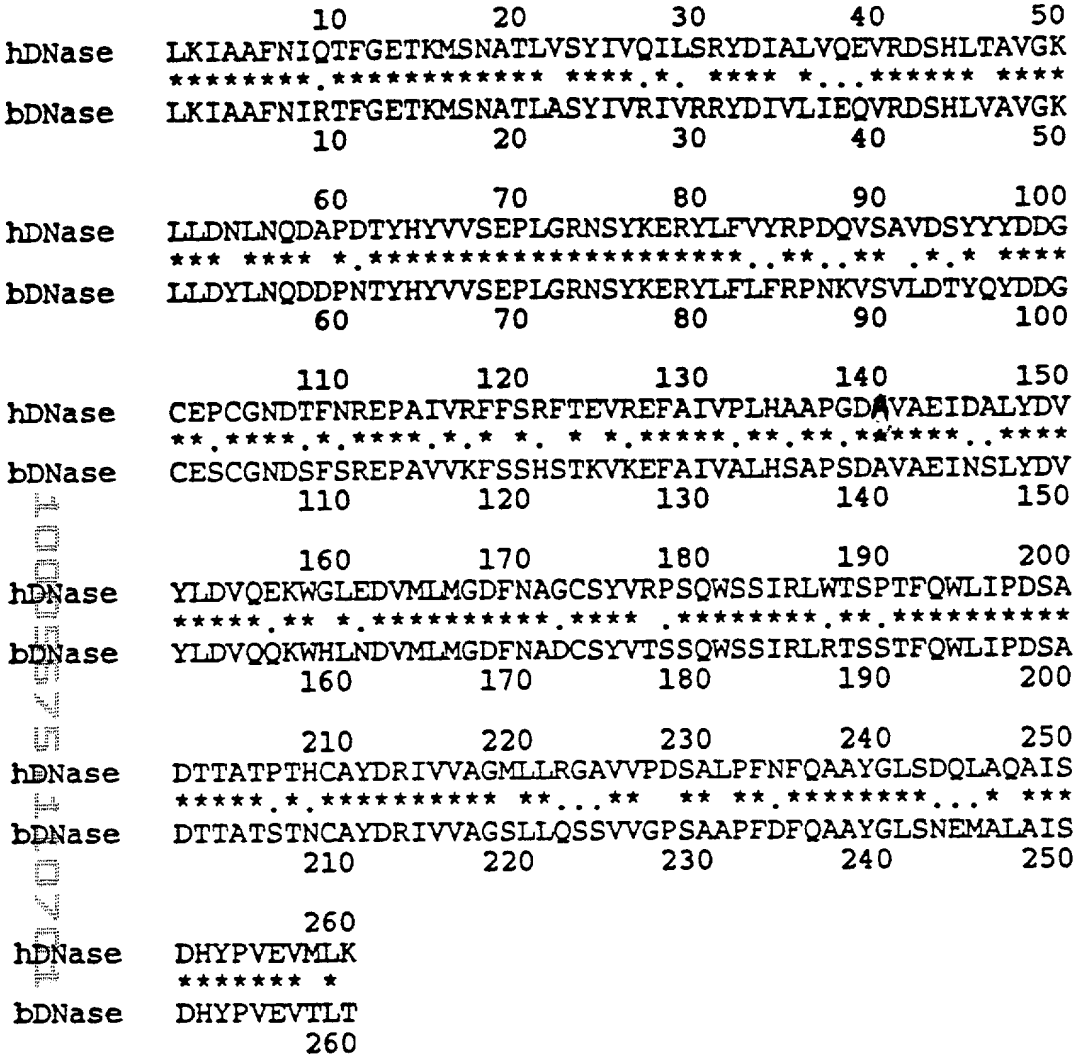
 701 GCTTGGAGGA CGTCATGTTG ATGGGCGACT TCAATGCGGG CTGCAGCTAT GTGAGACCCT CCCAGTGGTC ATCCATCCGC CTGTGGACAA GCCCCACCTT
     CGAACCTCCT GCAGTACAAC TACCCGCTGA AGTTACGCCC GACGTCGATA CACTCTGGGA GGGTCACCAG TAGGTAGGCG GACACCTGTT CGGGGTGGAA
 235   LeuGluAs pValMetLeu MetGlyAspP heAsnAlaGl yCysSerTyr ValArgProS erGlnTrpSe rSerIleArg LeuTrpThrS erProThrPhe

 801 CCAGTGGCTG ATCCCCGACA GCGCTGACAC CACAGCTACA CCCACGCACT GTGCCTATGA CAGGATCGTG GTTGCAGGGA TGCTGCTCCG AGGCGCCGTT
     GGTCACCGAC TAGGGGCTGT CGCGACTGTG GTGTCGATGT GGGTGCGTGA CACGGATACT GTCCTAGCAC CAACGTCCCT ACGACGAGGC TCCGCGGCAA
 268   GlnTrpLeu IleProAspS erAlaAspTh rThrAlaThr ProThrHisC ysAlaTyrAs pArgIleVal ValAlaGlyM etLeuLeuAr gGlyAlaVal

 901 GTTCCCGACT CGGCTCTTCC CTTTAACTTC CAGGCTGCCT ATGGCCTGAG TGACCAACTG GCCCAAGCCA TCAGTGACCA CTATCCAGTG GAGGTGATGC
     CAAGGGCTGA GCCGAGAAGG GAAATTGAAG GTCCGACGGA TACCGGACTC ACTGGTTGAC CGGGTTCGGT AGTCACTGGT GATAGGTCAC CTCCACTACG
 301 ValProAspS erAlaLeuPr oPheAsnPhe GlnAlaAlaT yrGlyLeuSe rAspGlnLeu AlaGlnAlaI leSerAspHi sTyrProVal GluValMetLeu

1001 TGAAGTGAGC AGCCCCTCCC CACACCAGTT GAACTGCAG
     ACTTCACTCG TCGGGGAGGG GTGTGGTCAA CTTGACGTC
 335   LysOP*Al aAlaProPro HisThrSerO P*ThrAla
```

FIGURE 2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bDNase LKIAAFNIRTFGETKMSNATLASYIVRIVRRYDIVLIEQVRDSHLVAVGK
10 20 30 40 50
60 70 80 90 100
hDNase LLDNLNQDAPDTYHYVVSEPLGRNSYKERYLFVYRPDQVSAVDSYYYDDG
bDNase LLDYLNQDDPNTYHYVVSEPLGRNSYKERYLFLFRPNKVSVLDTYQYDDG
60 70 80 90 100
110 120 130 140 150
hDNase CEPCGNDTFNREPAIVRFFSRFTEVREFAIVPLHAAPGDAVAEIDALYDV
bDNase CESCGNDSFSREPAVVKFSSHSTKVKEFAIVALHSAPSDAVAEINSLYDV
110 120 130 140 150
160 170 180 190 200
hDNase YLDVQEKWGLEDVMLMGDFNAGCSYVRPSQWSSIRLWTSPTFQWLIPDSA
bDNase YLDVQQKWHLNDVMLMGDFNADCSYVTSSQWSSIRLRTSSTFQWLIPDSA
160 170 180 190 200
210 220 230 240 250
hDNase DTTATPTHCAYDRIVVAGMLLRGAVVPDSALPFNFQAAYGLSDQLAQAIS
bDNase DTTATSTNCAYDRIVVAGSLLQSSVVGPSAAPFDFQAAYGLSNEMALAIS
210 220 230 240 250
260
hDNase DHYPVEVMLK
bDNase DHYPVEVTLT
260

Fig. 3

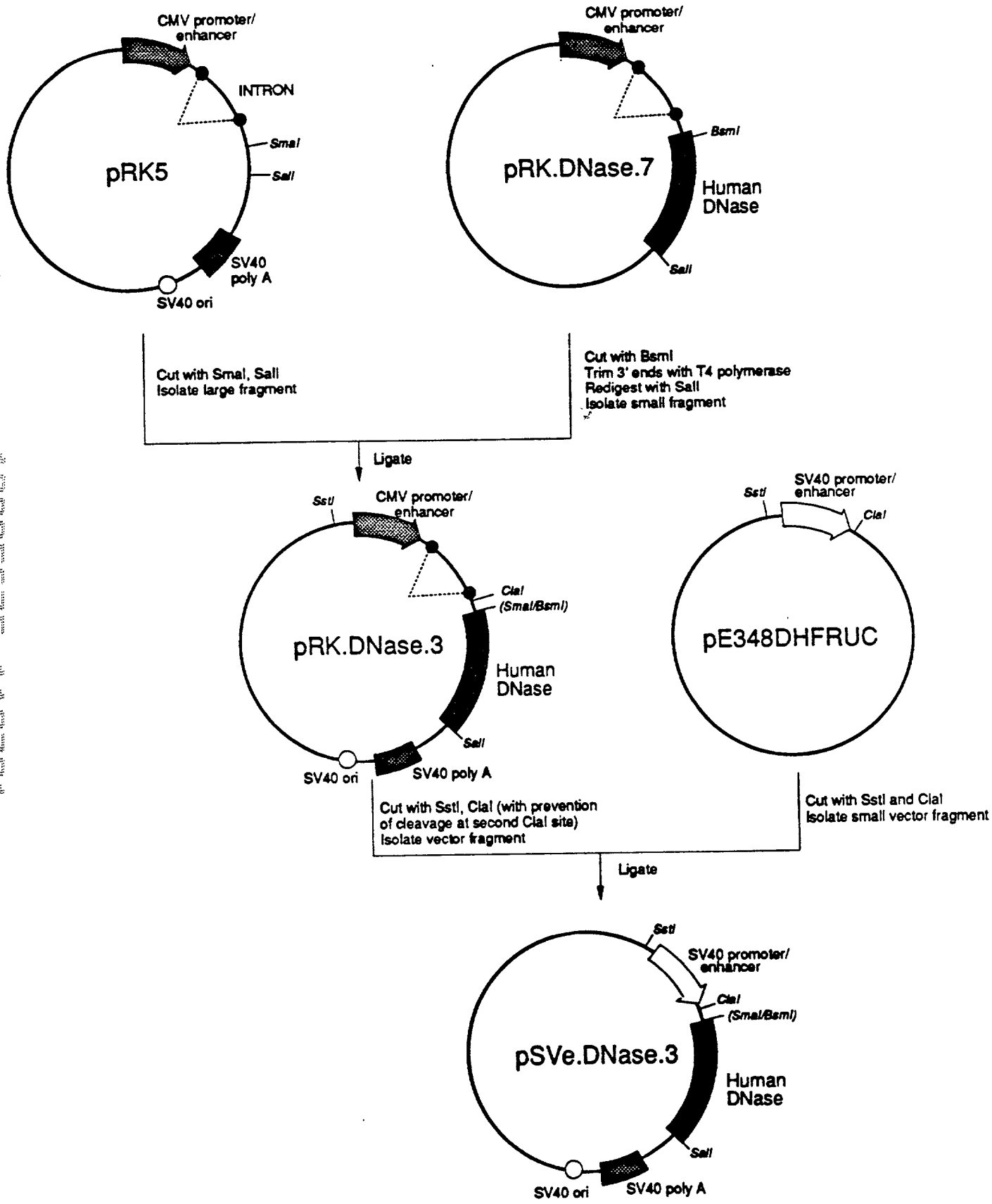

CMV promoter/
enhancer
INTRON
SmaI
SalI
pRK5
SV40
poly A
SV40 ori
CMV promoter/
enhancer
BsmI
pRK.DNase.7
Human
DNase
SalI
Cut with SmaI, SalI
Isolate large fragment
Cut with BsmI
Trim 3' ends with T4 polymerase
Redigest with SalI
Isolate small fragment
Ligate
SstI
CMV promoter/
enhancer
ClaI
(SmaI/BsmI)
pRK.DNase.3
Human
DNase
SalI
SV40 ori
SV40 poly A
SstI
SV40 promoter/
enhancer
ClaI
pE348DHFRUC
Cut with SstI, ClaI (with prevention
of cleavage at second ClaI site)
Isolate vector fragment
Cut with SstI and ClaI
Isolate small vector fragment
Ligate
SstI
SV40 promoter/
enhancer
ClaI
(SmaI/BsmI)
pSVe.DNase.3
Human
DNase
SalI
SV40 ori
SV40 poly A

Fig. 4

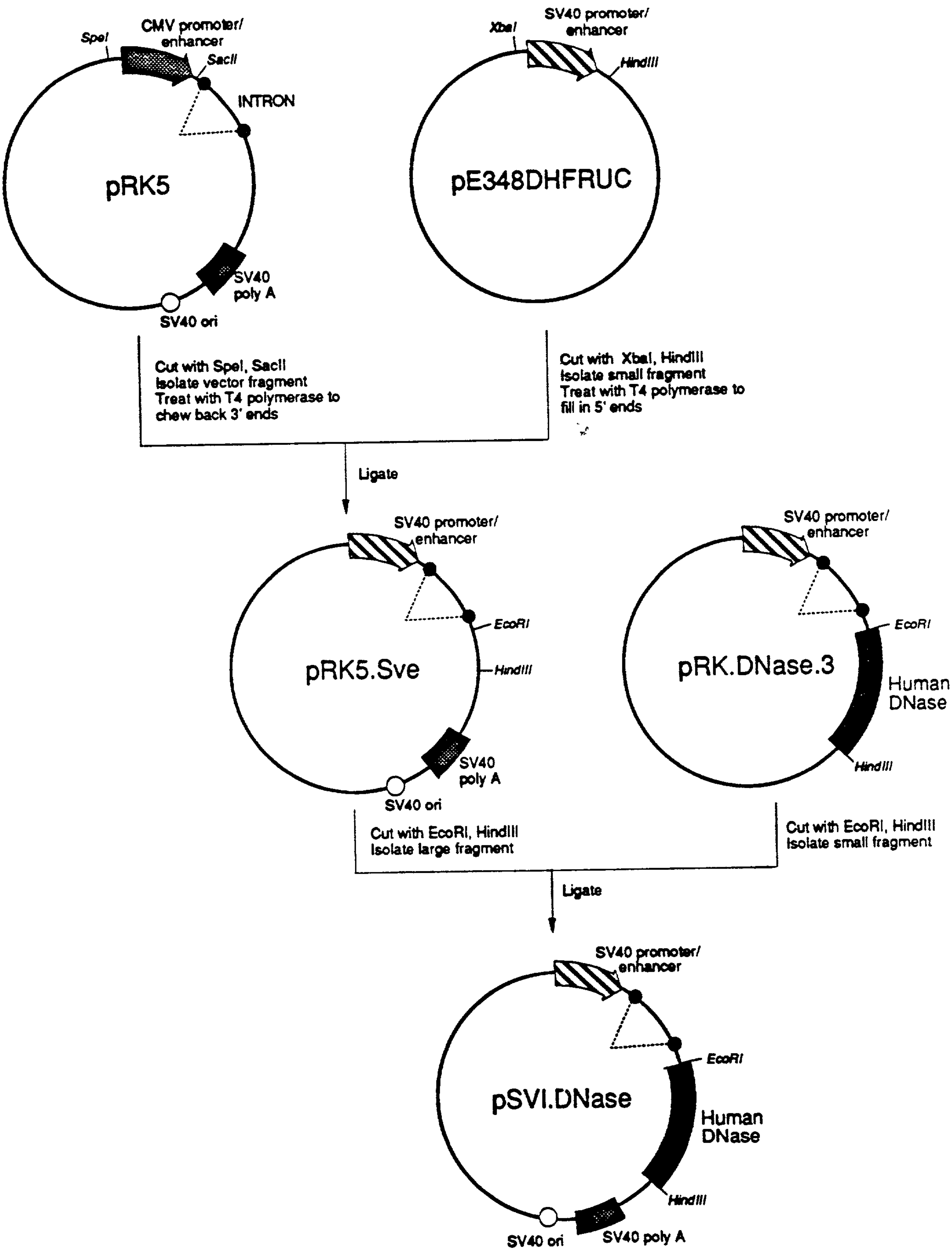

pRK5
SpeI
CMV promoter/ enhancer
SacII
INTRON
SV40 poly A
SV40 ori
pE348DHFRUC
XbaI
SV40 promoter/ enhancer
HindIII
Cut with SpeI, SacII
Isolate vector fragment
Treat with T4 polymerase to chew back 3' ends
Cut with XbaI, HindIII
Isolate small fragment
Treat with T4 polymerase to fill in 5' ends
Ligate
pRK5.Sve
SV40 promoter/ enhancer
EcoRI
HindIII
SV40 poly A
SV40 ori
pRK.DNase.3
SV40 promoter/ enhancer
EcoRI
Human DNase
HindIII
Cut with EcoRI, HindIII
Isolate large fragment
Cut with EcoRI, HindIII
Isolate small fragment
Ligate
pSVI.DNase
SV40 promoter/ enhancer
EcoRI
Human DNase
HindIII
SV40 ori
SV40 poly A

Fig. 5

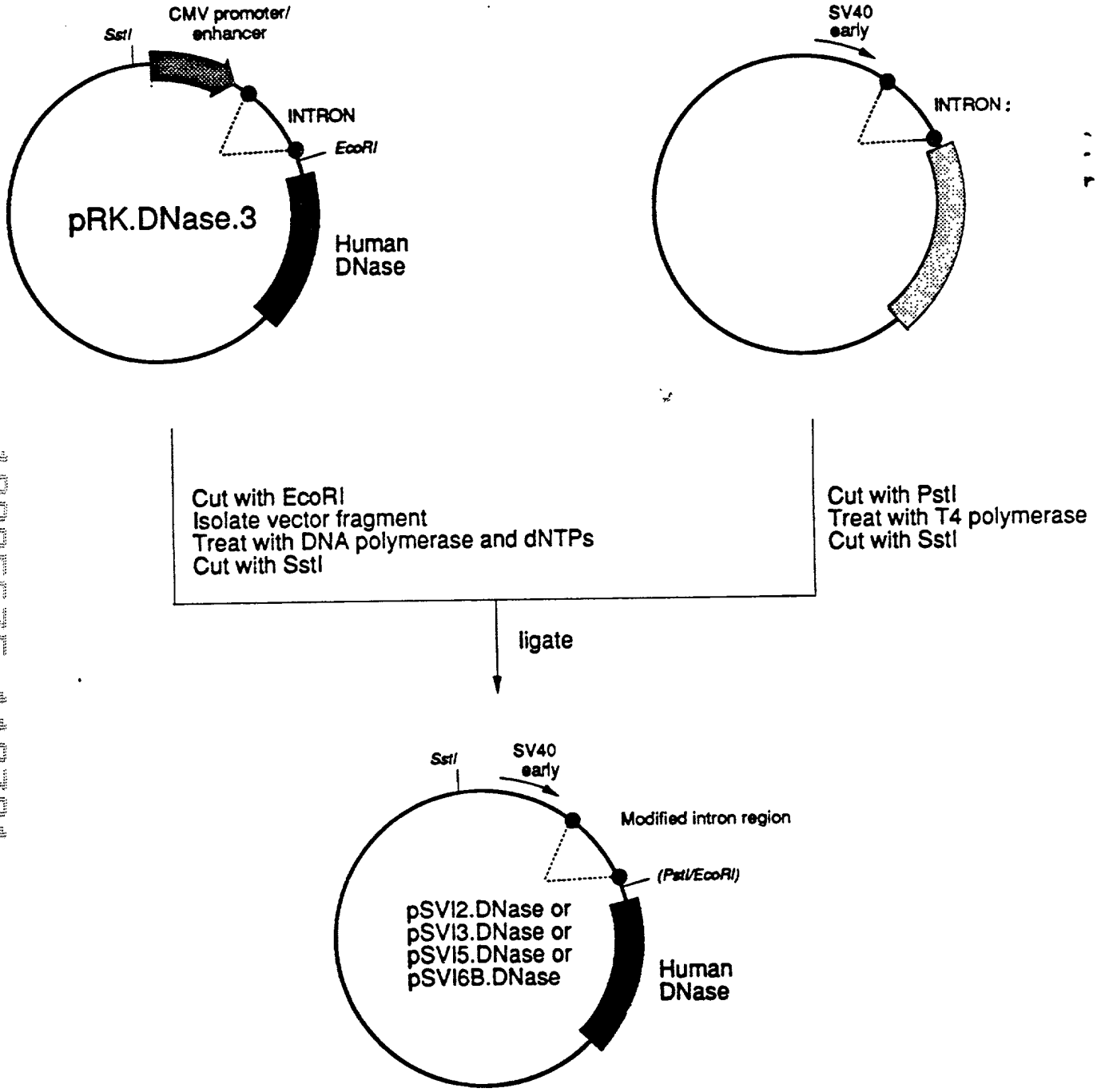


FIG. 6

```
   aluI                                taqI
  sstI                                salI
  sacI                                hindII
  hgiJII                              hincII                                                                nlaIV
  hgiAI                               accI                                                              scrFI
  bsp1286                           pleI     aluI                                                       ecoRII
  banII                             hinfI   pvuII                                                       bstNI
 taqI
1 TTCGAGCTCG CCCGACATTG ATTATTGACT AGAGTCGACA GCTGTGGAAT GTGTGTCAGT TAGGGTGTGG AAAGTCCCCA GGCTCCCCAG CAGGCAGAAG
  AAGCTCGAGC GGGCTGTAAC TAATAACTGA TCTCAGCTGT CGACACCTTA CACACAGTCA ATCCCACACC TTTCAGGGGT CCGAGGGGTC GTCCGTCTTC

                                                                                                   sfaNI
         nsiI                                                      nlaIV                          nsiI
          avaIII                          scrFI               scrFI                                 avaIII
        nlaIII                            ecoRII              ecoRII                               nlaIII
       sphI sfaNI                         bstNI               bstNI                               sphI
       nspCIx                                                                                     nspCIx
101 TATGCAAAGC ATGCATCTCA ATTAGTCAGC AACCAGGTGT GGAAAGTCCC CAGGCTCCCC AGCAGGCAGA AGTATGCAAA GCATGCATCT CAATTAGTCA
    ATACGTTTCG TACGTAGAGT TAATCAGTCG TTGGTCCACA CCTTTCAGGG GTCCGAGGGG TCGTCCGTCT TCATACGTTT CGTACGTAGA GTTAATCAGT

                                                                                   nlaIII
                                                                                  styI
                                     fokI                  bsrI                   ncoI
201 GCAACCATAG TCCCGCCCCT AACTCCGCCC ATCCCGCCCC TAACTCCGCC CAGTTCCGCC CATTCTCCGC CCCATGGCTG ACTAATTTTT TTTATTTATG
    CGTTGGTATC AGGGCGGGGA TTGAGGCGGG TAGGGCGGGG ATTGAGGCGG GTCAAGGCGG GTAAGAGGCG GGGTACCGAC TGATTAAAAA AAATAAATAC

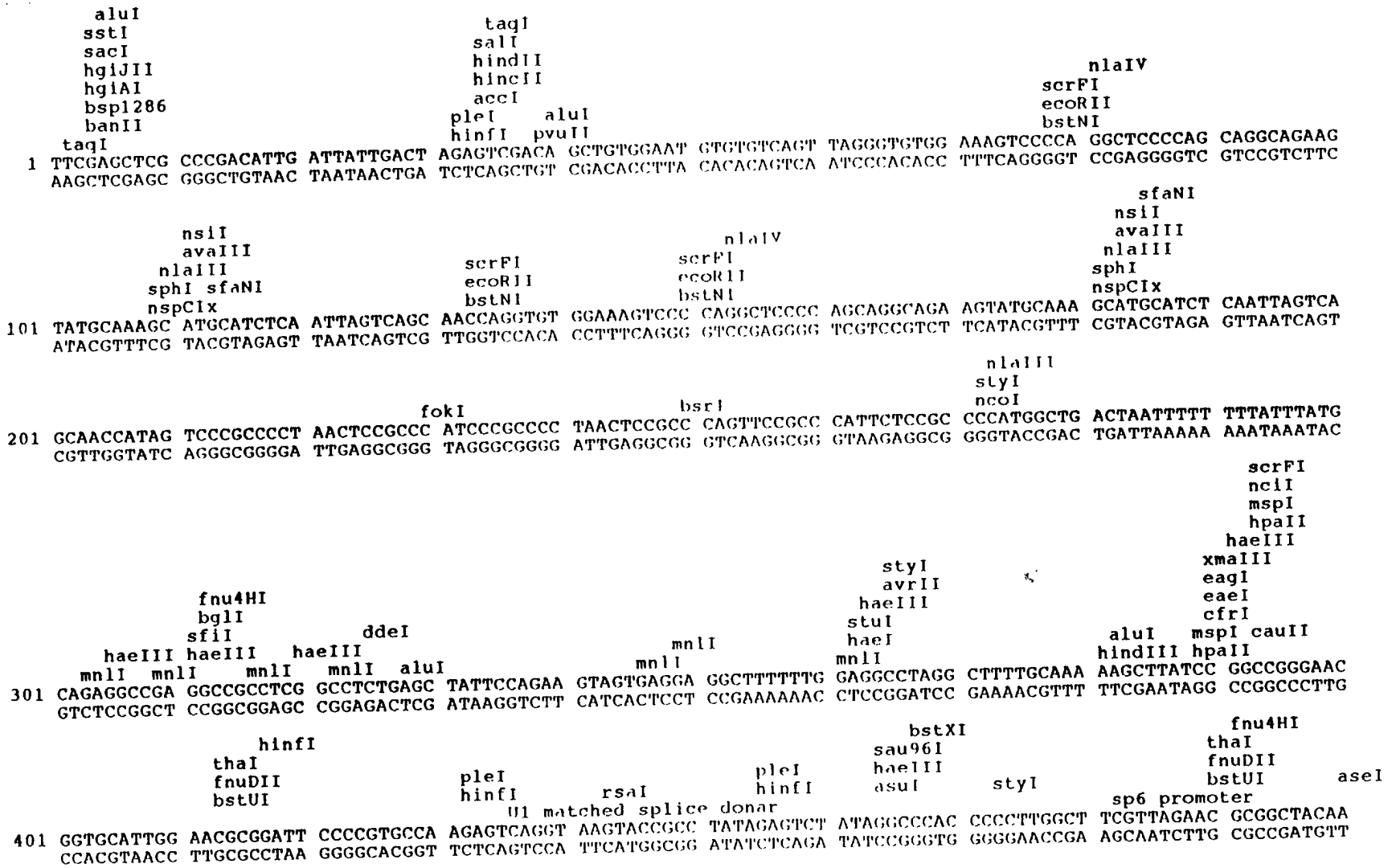
                                                                                                  scrFI
                                                                                                  nciI
                                                                 styI                             mspI
                                                                 avrII                            hpaII
      fnu4HI                                                    haeIII                            cauII
      bglI                                                     stuI                 aluI        haeIII
     sfiI                    ddeI                    mnlI      haeI               hindIII      sau96I
 haeIII haeIII           haeIII                    mnlI       mnlI                             asuI
mnlI  mnlI        mnlI    mnlI   aluI
301 CAGAGGCCGA GGCCGCCTCG GCCTCTGAGC TATTCCAGAA GTAGTGAGGA GGCTTTTTTG GAGGCCTAGG CTTTTGCAAA AAGCTTATCG GGCCGGGAAC
    GTCTCCGGCT CCGGCGGAGC CGGAGACTCG ATAAGGTCTT CATCACTCCT CCGAAAAAAC CTCCGGATCC GAAAACGTTT TTCGAATAGC CCGGCCCTTG

                                                                                                   fnu4HI
                                                                  bstXI                           thaI
              hinfI                                              sau96I                           fnuDII
        thaI                                           pleI      haeIII                           bstUI       aseI
        fnuDII                          rsaI           hinfI     asuI        styI             sp6 promoter
        bstUI
401 GGTGCATTGG AACGCGGATT CCCCGTGCCA AGAGTGACGT AAGTACCGCC TATAGAGTCT ATAGGCCCAC CCCCTTGGCT TCGTTAGAAC GCGGCTACAA
    CCACGTAACC TTGCGCCTAA GGGGCACGGT TCTCACTGCA TTCATGGCGG ATATCTCAGA TATCCGGGTG GGGGAACCGA AGCAATCTTG CGCCGATGTT
```

FIG. 6 (con't)

```
                                                                                                                         sau96I
                                                                                                                         avaII
                                                                                                                          asuI
                                                                                                                       scrFI
                                                                                                                       ecoRII
                                                                                                                       bstNI
                                                    hphI                 fokI
     mseI                                                           sp6 RNA start
                    note ATG
501  TTAATACATA ACCTTATGTA TCATACACAT ACGATTTAGG TGACACTATA GAATAACATC CACTTTGCCT TTCTCTCCAC AGGTGTCCAC TCCCAGGTCC
     AATTATGTAT TGGAATACAT AGTATGTGTA TGCTAAATCC ACTGTGATAT CTTATTGTAG GTGAAACGGA AAGAGAGGTG TCCACAGGTG AGGGTCCAGG

                                   bspMI
                        aluI     pstI
                      hindIII   fnu4HI
            mnlI      ddeI      bbvI                 mseI   hgaI
 1
            cloning linker
601  AACTGCACCT CGGTTCTAAG CTTGGGCTGC AGGTCGCCGT GAATTTAAGG GACGCTGTGA AGCA
     TTGACGTGGA GCCAAGATTC GAACCCGACG TCCAGCGGCA CTTAAATTCC CTGCGACACT TCGT
```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sacI
hgiJII
hgiAI
bsp1286
banII
taqI
taqI
salI
hindII
hincII
accI
pleI
hinfI
aluI
pvuII
nlaIV
scrFI
ecoRII
bstNI
1 TTCGAGCTCG CCCGACATTG ATTATTGACT AGAGTCGACA GCTGTGGAAT GTGTGTCAGT TAGGGTGTGG AAAGTCCCCA GGCTCCCCAG CAGGCAGAAG
AAGCTCGAGC GGGCTGTAAC TAATAACTGA TCTCAGCTGT CGACACCTTA CACACAGTCA ATCCCACACC TTTCAGGGGT CCGAGGGGTC GTCCGTCTTC
sfaNI
nsiI
avaIII
nlaIII
sphI
nspCIx
nsiI
avaIII
nlaIII
sphI sfaNI
nspCIx
scrFI
ecoRII
bstNI
nlaIV
scrFI
ecoRII
bstNI
101 TATGCAAAGC ATGCATCTCA ATTAGTCAGC AACCAGGTGT GGAAAGTCCC CAGGCTCCCC AGCAGGCAGA AGTATGCAAA GCATGCATCT CAATTAGTCA
ATACGTTTCG TACGTAGAGT TAATCAGTCG TTGGTCCACA CCTTTCAGGG GTCCGAGGGG TCGTCCGTCT TCATACGTTT CGTACGTAGA GTTAATCAGT
nlaIII
styI
ncoI
fokI
bsrI
201 GCAACCATAG TCCCGCCCCT AACTCCGCCC ATCCCGCCCC TAACTCCGCC CAGTTCCGCC CATTCTCCGC CCCATGGCTG ACTAATTTTT TTTATTTATG
CGTTGGTATC AGGGCGGGGA TTGAGGCGGG TAGGGCGGGG ATTGAGGCGG GTCAAGGCGG GTAAGAGGCG GGGTACCGAC TGATTAAAAA AAATAAATAC
scrFI
nciI
mspI
hpaII
haeIII
xmaIII
eagI
eaeI
cfrI
aluI mspI cauII
hindIII hpaII
styI
avrII
haeIII
stuI
haeI
mnlI
fnu4HI
bglI
sfiI
ddeI
haeIII haeIII haeIII
mnlI mnlI mnlI mnlI aluI
mnlI
mnlI
301 CAGAGGCCGA GGCCGCCTCG GCCTCTGAGC TATTCCAGAA GTAGTGAGGA GGCTTTTTTG GAGGCCTAGG CTTTTGCAAA AAGCTTATCC GGCCGGGAAC
GTCTCCGGCT CCGGCGGAGC CGGAGACTCG ATAAGGTCTT CATCACTCCT CCGAAAAAAC CTCCGGATCC GAAAACGTTT TTCGAATAGG CCGGCCCTTG
fnu4HI
thaI
fnuDII
bstUI
ase I
bstXI
sau96I
haeIII
asuI
styI
pleI
hinfI
hinfI
thaI
fnuDII
bstUI
pleI
hinfI
rsaI
U1 matched splice donar
sp6 promoter
401 GGTGCATTGG AACGCGGATT CCCCGTGCCA AGAGTCAGGT AAGTACCGCC TATAGAGTCT ATAGGCCCAC CCCCTTGGCT TCGTTAGAAC GCGGCTACAA
CCACGTAACC TTGCGCCTAA GGGGCACGGT TCTCAGTCCA TTCATGGCGG ATATCTCAGA TATCCGGGTG GGGGAACCGA AGCAATCTTG CGCCGATGTT

FIG. 7 (con't)


```
                                                                                                                    sau96I
                                                                                                                    avaII
                                                                                                                    asuI
                                                                                                                 scrFI
                                                                                                                 ecoRII
                                                                                                                 bstNI
                                                        hphI                   fokI
    mseI                                                                 sp6 RNA start
                        note ATG
501 TTAATACATA ACCTTATGTA TCATACACAT ACGATTTAGG TGACACTATA GAATAACATC CACTTTGCCT TTCTCTCCAC AGGTGTCCAC TCCCAGGTCC
    AATTATGTAT TGGAATACAT AGTATGTGTA TGCTAAATCC ACTGTGATAT CTTATTGTAG GTGAAACGGA AAGAGAGGTG TCCACAGGTG AGGGTCCAGG

                                     bspMI
                           aluI    pstI
                          hindIII fnu4HI
              mnlI       ddeI     bbvI                      mseI      hgaI
  1
              cloning linker
601 AACTGCACCT CGGTTCTAAG CTTGGGCTGC AGGTCGCCGT GAATTTAAGG GACGCTGTGA AGCA
    TTGACGTGGA GCCAAGATTC GAACCCGACG TCCAGCGGCA CTTAAATTCC CTGCGACACT TCGT
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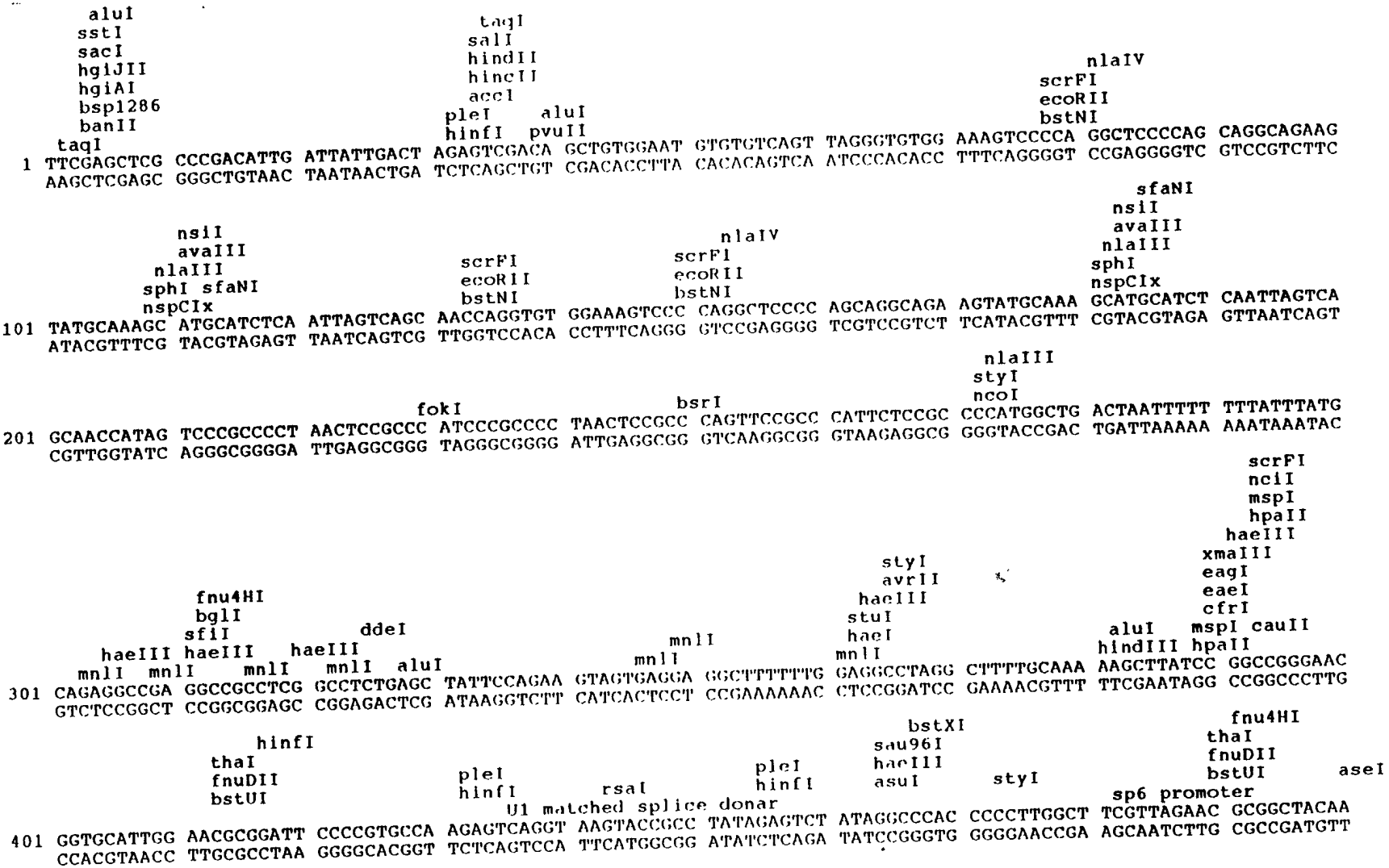
FIG. 8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sstI
sacI
hgiJII
hgiAI
bsp1286
banII
taqI
taqI
salI
hindII
hincII
accI
pleI
hinfI
aluI
pvuII
nlaIV
scrFI
ecoRII
bstNI
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AAGCTCGAGC GGGCTGTAAC TAATAACTGA TCTCAGCTGT CGACACCTTA CACACAGTCA ATCCCACACC TTTCAGGGGT CCGAGGGGTC GTCCGTCTTC
sfaNI
nsiI
avaIII
nlaIII
sphI
nspCIx
nsiI
avaIII
nlaIII
sphI sfaNI
nspCIx
scrFI
ecoRII
bstNI
nlaIV
scrFI
ecoRII
bstNI
101 TATGCAAAGC ATGCATCTCA ATTAGTCAGC AACCAGGTGT GGAAAGTCCC CAGGCTCCCC AGCAGGCAGA AGTATGCAAA GCATGCATCT CAATTAGTCA
ATACGTTTCG TACGTAGAGT TAATCAGTCG TTGGTCCACA CCTTTCAGGG GTCCGAGGGG TCGTCCGTCT TCATACGTTT CGTACGTAGA GTTAATCAGT
nlaIII
styI
ncoI
fokI
bsrI
201 GCAACCATAG TCCCGCCCCT AACTCCGCCC ATCCCGCCCC TAACTCCGCC CAGTTCCGCC CATTCTCCGC CCCATGGCTG ACTAATTTTT TTTATTTATG
CGTTGGTATC AGGGCGGGGA TTGAGGCGGG TAGGGCGGGG ATTGAGGCGG GTCAAGGCGG GTAAGAGGCG GGGTACCGAC TGATTAAAAA AAATAAATAC
scrFI
nciI
mspI
hpaII
haeIII
xmaIII
eagI
eaeI
cfrI
aluI
mspI cauII
hindIII hpaII
styI
avrII
haeIII
stuI
haeI
mnlI
fnu4HI
bglI
sfiI
ddeI
haeIII haeIII haeIII
mnlI mnlI mnlI mnlI aluI
mnlI
mnlI
301 CAGAGGCCGA GGCCGCCTCG GCCTCTGAGC TATTCCAGAA GTAGTGAGGA GGCTTTTTTG GAGGCCTAGG CTTTTGCAAA AAGCTTATCC GGCCGGGAAC
GTCTCCGGCT CCGGCGGAGC CGGAGACTCG ATAAGGTCTT CATCACTCCT CCGAAAAAAC CTCCGGATCC GAAAACGTTT TTCGAATAGG CCGGCCCTTG
fnu4HI
thaI
fnuDII
bstUI
aseI
bstXI
sau96I
haeIII
asuI
styI
hinfI
thaI
fnuDII
bstUI
pleI
hinfI
rsaI
pleI
hinfI
U1 matched splice donar
sp6 promoter
401 GGTGCATTGG AACGCGGATT CCCCGTGCCA AGAGTCAGGT AAGTACCGCC TATAGAGTCT ATAGGCCCAC CCCCTTGGCT TCGTTAGAAC GCGGCTACAA
CCACGTAACC TTGCGCCTAA GGGGCACGGT TCTCAGTCCA TTCATGGCGG ATATCTCAGA TATCCGGGTG GGGGAACCGA AGCAATCTTG CGCCGATGTT

FIG. 8 (con't)


```
                             sau3AI
                             mboI
                             dpnI
                             alwI
                            xhoII
                            nlaIV
                            bstYI
                            bamHI                                                                       sau96I
                            alwI                                                                        avaII              aluI
                                                                                                        asuI              hindIII
      mseI                removed ATG  fokI                                                         scrFI                  taqI
                                      lariat consensus                                              ecoRII                bstBI
                                                                                                    bstNI        mnlI     asuII
                                                                                                                 cloning linker
501 TTAATACATA ACCTTTTGGA TCCTATAGAC TGACATCCAC TTTGCCTTTC TCTCCACAGG TGTCCACTCC CAGGTCCAAC TGCACCTCGG TTCGAAGCTT
    AATTATGTAT TGGAAAACCT AGGATATCTG ACTGTAGGTG AAACGGAAAG AGAGGTGTCC ACAGGTGAGG GTCCAGGTTG ACGTGGAGCC AAGCTTCGAA

          bspMI
        pstI
       fnu4HI
       bbvI                       mseI   hgaI
  1
601 GGGCTGCAGG TCGCCGTGAA TTTAAGGGAC GCTGTGAAGC A
    CCCGACGTCC AGCGGCACTT AAATTCCCTG CGACACTTCG T
```

FIG. 9

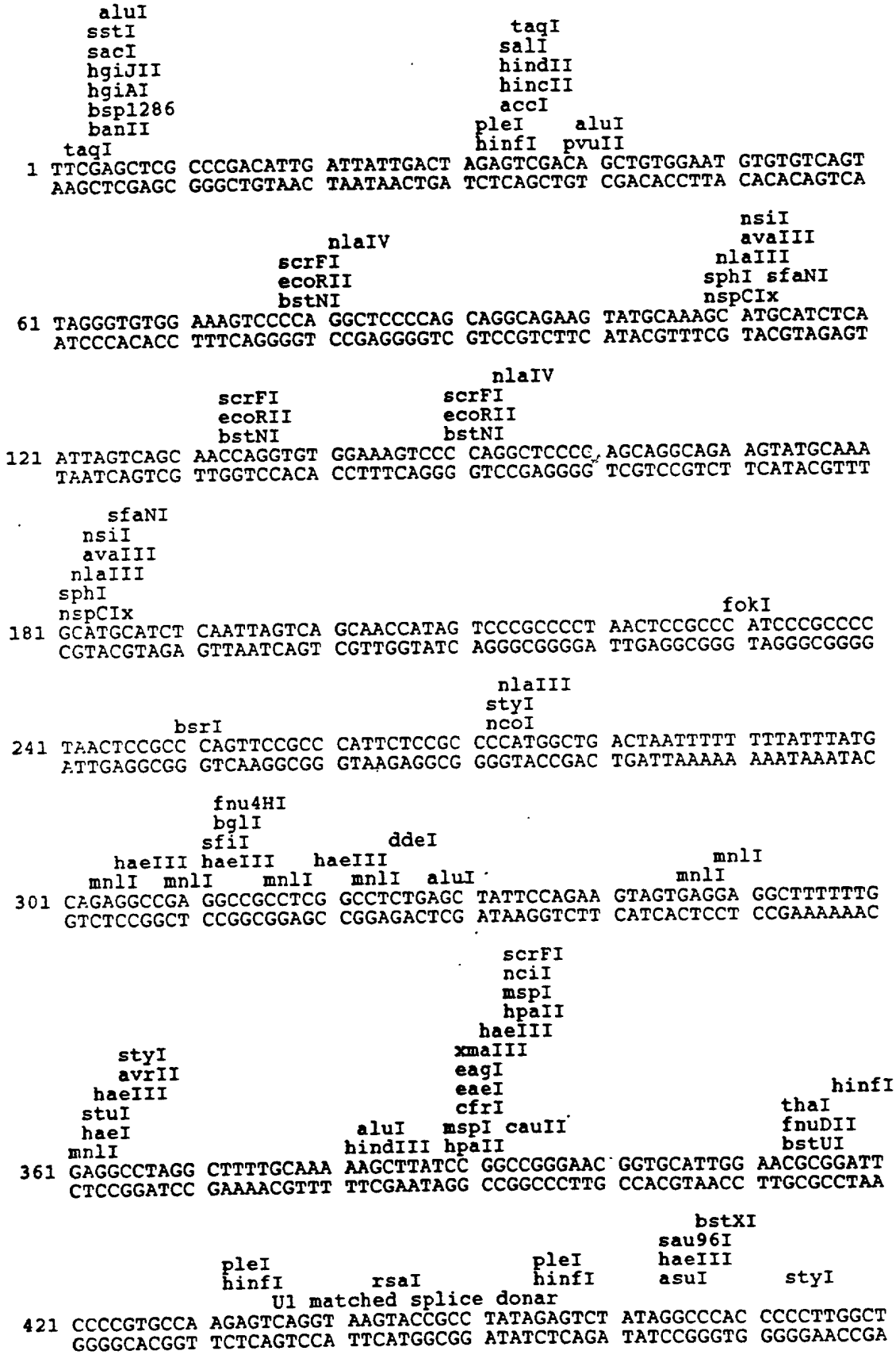


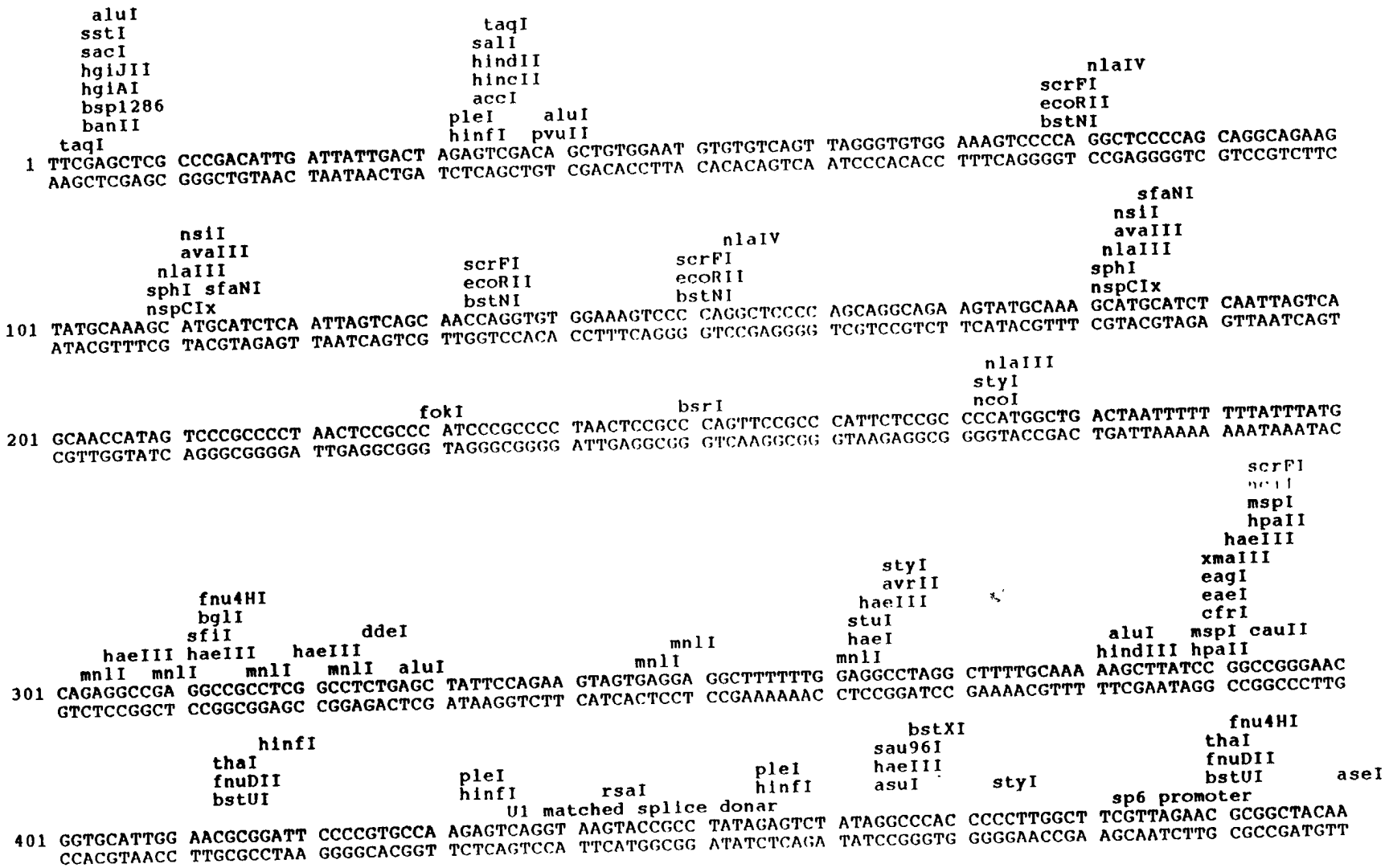
FIG. 7
(cont'd)

```
                                                   sau3AI
                                                   mboI
                                                   dpnI
                                                   alwI
                                                  xhoII
                                                  nlaIV
                                                  bstYI
                                                  bamHI
                                                  alwI
        fnu4HI                                 removed ATG
      thaI                                              U2 match lariat consensus
      fnuDII       mseI
      bstUI      aseI
  sp6 promoter
481 TCGTTAGAAC GCGGCTACAA TTAATACATA ACCTTTTGGA TCCTACTAAC TACTGACTTA
    AGCAATCTTG CGCCGATGTT AATTATGTAT TGGAAAACCT AGGATGATTG ATGACTGAAT

                                             sau96I
                                             avaII
                                             asuI                   thaI
                                          scrFI                     fnuDII
                                          ecoRII                    bstUI
                                          bstNI          mnlI      nruI hindIII
                                                         cloning linker
541 TTCTTTTCCT TTCTCTCCAC AGGTGTCCAC TCCCAGGTCC AACTGCACCT CGGTTCGCGA
    AAGAAAAGGA AAGAGAGGTG TCCACAGGTG AGGGTCCAGG TTGACGTGGA GCCAAGCGCT

         bspMI
       pstI
      fnu4HI
  aluI  bbvI                     mseI    hgaI
 1
601 AGCTTGGGCT GCAGGTCGCC GTGAATTTAA GGGACGCTGT GAAGCA
    TCGAACCCGA CGTCCAGCGG CACTTAAATT CCCTGCGACA CTTCGT
```

FIG. 10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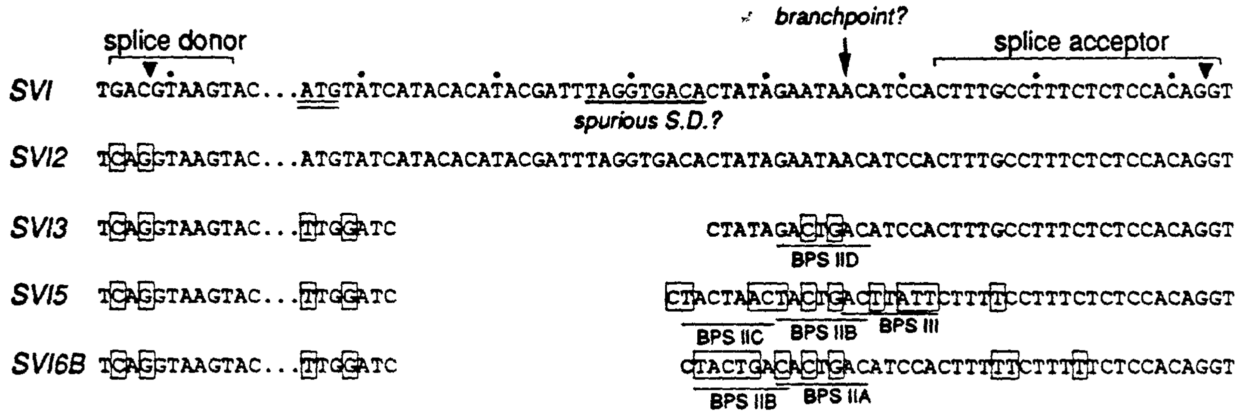
sstI
sacI
hgiJII
hgiAI
bsp1286
banII
taqI
taqI
salI
hindII
hincII
accI
pleI
aluI
hinfI
pvuII
nlaIV
scrFI
ecoRII
bstNI
1 TTCGAGCTCG CCCGACATTG ATTATTGACT AGAGTCGACA GCTGTGGAAT GTGTGTCAGT TAGGGTGTGG AAAGTCCCCA GGCTCCCCAG CAGGCAGAAG
AAGCTCGAGC GGGCTGTAAC TAATAACTGA TCTCAGCTGT CGACACCTTA CACACAGTCA ATCCCACACC TTTCAGGGGT CCGAGGGGTC GTCCGTCTTC
sfaNI
nsiI
avaIII
nlaIII
sphI
nspCIx
nsiI
avaIII
nlaIII
sphI sfaNI
nspCIx
scrFI
ecoRII
bstNI
nlaIV
scrFI
ecoRII
bstNI
101 TATGCAAAGC ATGCATCTCA ATTAGTCAGC AACCAGGTGT GGAAAGTCCC CAGGCTCCCC AGCAGGCAGA AGTATGCAAA GCATGCATCT CAATTAGTCA
ATACGTTTCG TACGTAGAGT TAATCAGTCG TTGGTCCACA CCTTTCAGGG GTCCGAGGGG TCGTCCGTCT TCATACGTTT CGTACGTAGA GTTAATCAGT
nlaIII
styI
ncoI
fokI
bsrI
201 GCAACCATAG TCCCGCCCCT AACTCCGCCC ATCCCGCCCC TAACTCCGCC CAGTTCCGCC CATTCTCCGC CCCATGGCTG ACTAATTTTT TTTATTTATG
CGTTGGTATC AGGGCGGGGA TTGAGGCGGG TAGGGCGGGG ATTGAGGCGG GTCAAGGCGG GTAAGAGGCG GGGTACCGAC TGATTAAAAA AAATAAATAC
scrFI
ncoI
mspI
hpaII
haeIII
xmaIII
eagI
eaeI
cfrI
aluI
mspI cauII
hindIII hpaII
styI
avrII
haeIII
stuI
haeI
mnlI
fnu4HI
bglI
sfiI
ddeI
haeIII haeIII
haeIII
mnlI mnlI
mnlI
mnlI
mnlI
mnlI aluI
301 CAGAGGCCGA GGCCGCCTCG GCCTCTGAGC TATTCCAGAA GTAGTGAGGA GGCTTTTTTG GAGGCCTAGG CTTTTGCAAA AAGCTTATCC GGCCGGGAAC
GTCTCCGGCT CCGGCGGAGC CGGAGACTCG ATAAGGTCTT CATCACTCCT CCGAAAAAAC CTCCGGATCC GAAAACGTTT TTCGAATAGG CCGGCCCTTG
fnu4HI
thaI
fnuDII
bstUI
aseI
bstXI
sau96I
haeIII
asuI
styI
hinfI
thaI
fnuDII
bstUI
pleI
hinfI
rsaI
pleI
hinfI
U1 matched splice donar
sp6 promoter
401 GGTGCATTGG AACGCGGATT CCCCGTGCCA AGAGTCAGGT AAGTACCGCC TATAGAGTCT ATAGGCCCAC CCCCTTGGCT TCGTTAGAAC GCGGCTACAA
CCACGTAACC TTGCGCCTAA GGGGCACGGT TCTCAGTCCA TTCATGGCGG ATATCTCAGA TATCCGGGTG GGGGAACCGA AGCAATCTTG CGCCGATGTT

FIG. 10 (cont)

```
                  sau3AI
                  mboI
                  dpnI
                  alwI
                  xhoII
                  nlaIV
                  bstYI
                  bamHI
 mseI             alwI                                                  sau96I
                  removed ATG          fokI                             avaII                thaI aluI
                         U2 match                                       asuI                 fnuDII
                               lariat consensus                         scrFI                bstUI
                                 IgG vH natural lariat restored         ecoRII      mnlI     nruI hindIII
                                                                        bstNI       cloning linker
501 TTAATACATA ACCTTTTGGA TCCTACTGAC ACTGACATCC ACTTTTTCTT TTTCTCCACA GGTGTCCACT CCCAGGTCCA ACTGCACCTC GGTTCGCGAA
    AATTATGTAT TGGAAAACCT AGGATGACTG TGACTGTAGG TGAAAAAGAA AAAGAGGTGT CCACAGGTGA GGGTCCAGGT TGACGTGGAG CCAAGCGCTT

            bspMI
          pstI
        fnu4HI
        bbvI                 mseI    hgaI
  1
601 GCTTGGGCTG CAGGTCGCCG TGAATTTAAG GGACGCTGTG AAGCA
    CGAACCCGAC GTCCAGCGGC ACTTAAATTC CCTGCGACAC TTCGT
```

Fig. 11


branchpoint?
splice donor
splice acceptor
SVI TGACGTAAGTAC...ATGTATCATACACATACGATTTAGGTGACACTATAGAATAACATCCACTTTGCCTTTCTCTCCACAGGT
spurious S.D.?
SVI2 TCAGGTAAGTAC...ATGTATCATACACATACGATTTAGGTGACACTATAGAATAACATCCACTTTGCCTTTCTCTCCACAGGT
SVI3 TCAGGTAAGTAC...TTGGATC CTATAGACTGACATCCACTTTGCCTTTCTCTCCACAGGT
BPS IID
SVI5 TCAGGTAAGTAC...TTGGATC CTACTAACTACTGACTTATTCTTTTCCTTTCTCTCCACAGGT
BPS IIC
BPS IIB
BPS III
SVI6B TCAGGTAAGTAC...TTGGATC CTACTGACACTGACATCCACTTTTTCTTTTTCTCCACAGGT
BPS IIB
BPS IIA